



Power Protection and Conditioning

Alan Chiste, C.E.T.

Product Manager, Eaton Electrical Power Quality Division



The Quality Industry is rapidly changing due to the demand for increased reliability, the heightened sensitivity of loads, and new Power Quality products and solutions. This talk will provide an update on these issues, technologies and trends, as well as new surge protection and power conditioning products now available. Topics will include designing a facility-wide protection plan, ideas for effective power quality solutions, and new technologies such as electronic voltage regulation and sag ride through. A mix of theory and practical applications will be discussed. Expert advice on power quality concerns and possible solutions will be shared.

Mr. Chiste graduated with honors from the Electrical Engineering program at the Southern Alberta Institute of Technology (SAIT). Prior to his present position, he worked with the Cutler-Hammer Strategic Sales Force and as a Marketing/Engineering Specialist for Westinghouse Control Products. As Product Manager, Alan oversees product development, applications and technical training for surge suppression and power conditioning products and solutions.

Place: Eaton Electrical, 150 Industry Dr. Pittsburgh PA 15275
Date: March 23rd
Time: 6:00 PM – Dinner, \$22 per person. 7:00 PM – Program, no charge.

Dinner will include a choice of Chicken Romano or Lemon Pepper Cod, with herbed butter noodles and fresh vegetable, fresh spinach salad with sliced yellow delicious apples, Toasted Pecans, Danish Bleu Cheese and Honey Dijon Vinaigrette served with rolls and butter. Dessert is Cappuccino Torte, with Coffee & Tea.

This meeting will be of interest to members of IAS and PES. Reservations must be received by March 16th. Please send your meal choice and check for \$22 payable to "Pittsburgh Section IEEE" to Tom Dionise, Eaton Electrical, 130 Commonwealth Dr., Warrendale, PA 15090. For more information, contact Tom Dionise at (724) 779-5864 or by email at thomasjdionise@eaton.com.

Directions from Downtown Pittsburgh: Take Parkway West outbound (toward Pittsburgh International Airport) to Montour Run Road exit. Follow the exit ramp and bear to the right and travel underneath the Parkway. At the traffic light, turn left onto Cliff Mine Road. At the first set of traffic lights, bear right and go up the hill into RIDC Park West. At the top of the hill, turn right onto Industry Drive. Continue on to 150 Industry Drive.

Current & Voltage Measurements in High Voltage Systems Using Pure Optical Sensing Technique

Aftab Khan

Plant Manager, ABB High Voltage Components

Traditional stand-alone current and voltage measurement devices in high voltage transmission system (69 kV and above) utilize wound iron-cores or capacitive dividers to scale-down current and voltage levels for measurement. New current and voltage measurement devices utilizing pure optical sensing techniques offer the following advantages over these traditional devices: simple high voltage insulation, lighter weight, flexible installation options, accuracy over a wide primary current range, and optical isolation to measuring devices. This presentation will discuss the physical effect, which allows light to be used for current and voltage measurement, the design features of an optical current and voltage measurement device, and the advantages of this technology over traditional measurement devices.

Mr. Khan is responsible for ABB's surge arrester and optical sensor operations in the US. He has been employed with ABB Inc. for 11 years. Prior to joining ABB, he worked for GE as a Senior Application Engineer. Aftab holds an M.B.A. from Carnegie Mellon University, a M.E. from Rensselaer Polytechnic Institute, and a B.S.E.E. from the University of Alaska in Fairbanks.

Place: Westinghouse Energy Center, Monroeville, PA
Date: March 17th
Time: 6:30 PM – Social. 7:00 PM – Program.

This meeting will be of interest to members of IAS and PES. For more information or to register, please contact Harry Hagerty at (412) 492-0943 X 226 or by email at hhagerty@ieee.org by March 10th.

Directions: From downtown Pittsburgh, take the Parkway East (I-376) Outbound to Exit 14A (Monroeville). Cross the traffic light (Business 22) and proceed on Rt. 48 South for two traffic lights. Turn left onto Northern Pike. Proceed East ~ 0.2 miles and turn right at the first traffic light onto Westinghouse Drive. Travel 0.7 mile to the three flags where the main entrance is located. Parking in the evening will be plentiful in the large area in front of the building. Enter the main entrance. Check with security inside. You will be directed to the proper auditorium for the presentation.

From PA Turnpike, take Exit 57 (Monroeville). After the toll plaza, get in the left lane (Business-22). At the first light, turn left on to Rt. 48 South and follow the directions shown above.



Basics of Load Flow Analysis

Thomas J. Dionise, P.E.

Senior Power Systems Engineer, Eaton Electrical



Load flow studies are one of the common tools used in power system analysis. Analysis of the steady-state performance of a power system benefits planning, design and operation. In this talk, the basics of load flow analysis will be presented. The topics will include an overview of the types of load flow studies, discussion of data requirements, brief review of common solution methods and analysis techniques. Practical examples from industrial, commercial and utility power systems will be used to illustrate the concepts. After the presentation, there will be an opportunity to work an example case study on the computer.

Mr. Dionise is a Senior Power Systems Engineer with Eaton Electrical in the Power Systems Engineering Department. He has over 20 years of power system experience involving analytical studies and power quality investigations of industrial and commercial power systems. More recently, he has been involved in data center audits, power quality field measurements, and power quality problem solving. He is a Senior Member of the IEEE, Vice-Chair of the IAS Metals Industry Committee, has served in local positions, and had an active role in the committee that planned the IAS 2002 Annual Meeting in Pittsburgh, PA. He is a licensed Professional Engineer in PA, has a MSEE from Carnegie Mellon and has a BSEE from Penn State.

Place: Eaton Electrical, Power System Services
130 Commonwealth Dr., Warrendale, PA 15086
Date: March 4th
Social: 6:30 PM, Program: 7:00 PM, Computer Case Study: 8:15 PM

This meeting will be of interest to members of IAS and PES. For more information or to register, contact Charles Urso at (412) 338-4871 or by email at curso@llitechnologies.com by March 2, 2004.

Directions: From downtown Pittsburgh, take I-279 N for 13 miles and merge onto I-79 N (Exit 20). Exit I-79 north at Exit 75 (Warrendale). Turn left onto Warrendale-Bayne Rd., and then turn right onto Brush Creek Road at the Park N Ride. At the second traffic light where it crosses Thorn Hill Road, Brush Creek Road becomes Commonwealth Dr. Continue on Commonwealth for about 0.1 mile. Turn left into 130 Commonwealth Drive.

From the east, take PA Turnpike I-76 W. After the in-line toll booth, take Exit 28 and follow signs for US-19 S. Merge onto US-19S/Perry Highway. At the second traffic light on US-19S, turn right onto Brush Creek Rd. At next traffic light, turn right onto Commonwealth Dr. Continue on Commonwealth for about 0.1 mile. Turn left into 130 Commonwealth Drive.

PES & IAS Advanced Publicity

Tour of Allegheny Power

On this tour we will visit the Springdale, PA, facility of Allegheny Power where large combustion turbines and generators were recently installed. These large turbines burn natural gas. They have a higher fuel efficiency than coal fired steam turbines that means reduced greenhouse gasses, and they exhaust virtually no particulates. They further offer the advantages of a low spin up time so they can be brought on-line quickly for peaking service or respond to abnormal system conditions. This is one of the first large combustion turbine installations in this part of the country.

Place: Allegheny Power
Springdale, PA
Date: April 22nd

Please mark your calendar for these upcoming events. Complete details for these meetings will be in the April Bulletin.

Power Quality: An Overview Chris Sermon

Power Quality Systems, Inc.

With the growth of residential, commercial and industrial users, the quality of the electric power delivered and utilized has come under greater scrutiny. Suppliers, direct users and indirect users can feel the effects of poor power quality. This presentation provides an introduction to power quality - its origins, its level of importance and how it can be improved.

Date: May 6th

Section Officers

Chair – Elena Schreiber
elena.schreiber@us.transport.bombardier.com (412) 884-7774

Vice-Chair – Kaylan Sen
senkk@ieee.org
(724) 696-1611

Treasurer – Ralph Sprang
rsprang@ieee.org

Secretary – John Twigg
jtwigg@ascent-systems.com
(724) 387-2772

Chapter Chairs

Communication – Prashant Krishnamurthy
prashant@tele.pitt.edu
(412) 624-5144

Computer – John Twigg
jtwigg@ascent-systems.com
(724) 387-2772

Eng. in Medicine and Biology
Bob Brooks
rbrooks@medrad.com

Industry App. – Kal Sen
senkk@ieee.org
(724) 696-1611

Magnetics – Miklos Gyimesi
miklos.gyimesi@ansys.com
(412) 268-2308

Power Eng. – Kal Sen
kalyan.sen@emd.curtisswright.com
(724) 696-1611

Robotics - Guy Nicoletti
nicolett+@pitt.edu
(724) 836-9922

Signal Proc. – Mike McCloud
mmcloud@enr.pitt.edu

Committees

Awards – Michelle Antantis
mantantis@dqe.com
(412) 393-2308

Bulletin Editor - Mike Boccabella
m.boccabella@ieee.org
(724) 325-1776

GOLD – Paul Link
plink74@icubed.com

PACE – Joe Kalasky
j.a.kalasky@ieee.org

Directors

Hany Ammar
Ammar@cemr.wvu.edu
(304) 599-1018

Phil Cox
p.e.cox@ieee.org
(412) 820-1302

Larry Hornak
hornak@cemr.wvu.edu
(304) 293-6371 ext. 515

Nigel McQuin
n.p.mcquin@ieee.org
(412) 824-2165

Steve Swencki
steve.swencki@ieee.org
(412) 578-2725

Leadership Skills for Engineers in the Workplace

Charles P. Rubenstein, Ph.D.

Overview: The IEEE Pittsburgh Section PACE committee is presenting a workshop on leadership skills for engineers. There will be one section of the workshop as a single all-day session.

Who Should Attend: This course is intended to help engineers and engineering managers achieve advancements for themselves, and successes for the companies they work for.

Key Benefits: This workshop will help participants recognize and develop interpersonal, group, team and individual leadership skills. The format is through interactive participation, also using exercises and case studies. The skills developed are appropriate for application in management or leadership positions in various types of organizations, including business, industry and volunteer activities.

Content: The course will address such issues as: What are the attributes of a leader? What does a leader do? What motivates people? What motivates volunteers? What is the relationship between management and leadership? Holistic communications and active listening. Keys to leadership problem identification and solution techniques. Identification of personal interactive skills (Jungian types). Identifying conflict styles and managing conflict. Brainstorming for building teams and consensus. Coaching and persuasion. Basic presentation skills.

Instructor: Charles Rubenstein is a tenured professor of Engineering and Information Science at the Pratt Institute graduate School of Information and Library Science. He has an earned doctorate in Bioengineering from the Polytechnic Institute of New York and master's degree in Library and Information Science from Pratt Institute.

Dr. Rubenstein is a senior member of the IEEE. He has been a member of the IEEE-USA PACE Committees since 1999, currently serving as Vice-Chair, and a member of the Engineering Management Society Board of Governors since 1988, currently serving his fourth term as Vice President, Member Relations. Dr. Rubenstein has been an Engineering Management Society Distinguished Visitor since 1997.

Place: To Be Determined

Date: April 17th

Program: 8:00 AM to 4:00 PM (Lunch served)

Registration Fees

	By March 17 th	After March 17 th
Member	\$50	\$75
Non-Member	\$75	\$125

Seminar Coordinator: Harry Hagerty is the Past Chairman of the IEEE Pittsburgh Section. For more information, please contact Harry at (412) 492-0943 x226 or hhagerty@ieee.org. Reserve your spot now. Space is limited to 25. Deadline for registration is April 1st. This program is hosted by the IEEE Pittsburgh Section, and PACE.

Registration Form

Leadership Skills Workshop, April 17th, 2004

Make checks payable to "IEEE Pittsburgh Section". Submit check and registration form to Harry Hagerty, 1659 E Sutter Road, Glenshaw Pa 15116

Mr./Mrs./Ms. _____

All-day session Apr 17: _____

Home Address: _____

City and Zip: _____

Phone: _____ E-mail: _____

Member #: _____ Grade: _____

Amount enclosed: \$ _____

Section News

Annual History Dinner

Plans are underway for the Annual History Dinner. Mark your calendar for April 28th. Dinner will be at the APICS Castle in Wilmerding, PA. The featured speaker will be Mr. Ed Reis. His presentation will be about George Westinghouse, and a tour of the Westinghouse museum will be included.

Please watch the April Bulletin for full details about the dinner and plan to attend.

Electronic Distribution of the Bulletin

The Pittsburgh Section ExComm is moving forward with the electronic distribution of the Bulletin. Beginning this month, all members will receive an electronic copy of this issue. If you have been getting the paper version of the Bulletin, you will continue to receive that through May of this year. All issues after May will be electronic only. This change in distribution medium will save the section a considerable amount of money in both printing and postage.

To be prepared for this change, please visit services1.ieee.org/membersvc/coa/intro.htm and update your membership information. Be sure to check all contact information, including your e-mail address. This would be a good time to get an IEEE e-mail alias as well. Information on how to obtain an alias is included on that page. An e-mail alias will provide you with virus scanning on all attached documents, as well as a permanent e-mail address as long as you are an IEEE member.

EMC: What is it?

Harry Godlewski

With the advance of technology, electrical and electronic systems designs have become progressively more complex. This advancing complexity of design has led to intra-system and inter-system interactions not anticipated by the original designers. The vast majority of these interactions have resulted in system disoperation and failure.

The talk will provide an over view of EMC engineering. The origins and history of the discipline will be briefly reviewed. Types of EMI interactions will be discussed. Methods of addressing EMC will also be presented. Some working examples and anecdotes will be explored. The examples encompass conducted as well as radiated interactions.

Mr. Godlewski is currently the Corporate EMC Engineer for Crown Castle USA. Crown Castle, an infrastructure provider for the wireless industry, owns and manages over 10,000 wireless sites throughout the United States and Puerto Rico. He holds BS and MS degrees in electrical engineering from the University of Pittsburgh and Northeastern University, respectively. He is a Professional Engineer in the Commonwealth of Pennsylvania and a Certified EMC Engineer through the National Association of Radio and Telecommunications Engineers. He has over 20 years of experience in dealing with radio frequency design and various EMC issues.

Place: Burt Hill Kosar & Associates, Butler, PA

Date: April 1st

Social: 6:30 PM (complimentary dinner), Program: 7:15 PM

The PES and IAS chapters of IEEE Pittsburgh Section would like to thank Burt Hill Kosar & Associates for bearing the costs associated with this meeting. This meeting will be of interest to the members who belong to the PES and IAS societies. Please bring your associates interested in the lecture. For more information or to register, contact Ms. Jennifer Montgomery at (724) 285-4761 or email at Jennifer.montgomery@burthill.com or Faruq Ahmed at (724) 285-4761 or email at Faruq.Ahmed@burthill.com by March 25, 2004.

Directions: Follow Route 8 North to downtown Butler. Just after entering Butler, the County Court House will be on the left. The meeting location is at the Burt Hill Office in Morgan Center which is a large building located opposite the Court House. The street address is 101 E. Diamond Street, Butler, PA 16001. Parking is available in the area lots (metered 24 hours) or on the street. There will be instructions on the main door of the building.

Follow I-79 North and take PA 528 to Evans City. This road will end in PA 68. Take PA 68 through Evans City to Butler (11 miles). Turn right on Main Street (PA 8) and follow directions listed above.

For help with directions on the day of the meeting, please call (724) 822-1248.

Non-Profit Org.
U.S. Postage Paid
Pittsburgh, PA
Permit # 4172

Pittsburgh Section IEEE
337 Fourth Avenue
Pittsburgh, PA 15222

